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| 09/503,939 | 02/14/2000 | Andrew H. Gafken | 2207/8478 | 7313 |

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EXAMINER

AKPATI, ODAICHE T

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2135

DATE MAILED: 07/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/503,939

Applicant(s)

GAFKEN ET AL.

Examiner

Tracey Akpati

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-10, 16-26 and 28-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-10, 16-26 and 28-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

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DETAILED ACTION

1. Claims 7-10, 16-26 and 28-36 are pending. Claims 1-6, 11-15, 27 and 37-42 have been cancelled. Claims 7-9, 16-19, 22, 24, 26, 32-35 have been amended. The final rejection is necessitated by the amendment.

2. The drawing and Claim objections have been overcome.

Response to Arguments

3. Applicant's arguments filed 5/13/04 have been fully considered but they are not persuasive.

4. With respect to Claim 7-8, the attorney argues over the amended limitation. The attorney's arguments are moot over the examiner's updated rejection.

5. With respect to Claim 9, the attorney argues that the index table is not disclosed by Cooper et al. The index table is disclosed by Cooper et al because after shadowing is performed by copying the contents of selected portions of the flash ROM memory (i.e. the BIOS contained within the flash ROM) to DRAM, the address of the shadow RAM area is then mapped onto the address of the flash ROM address space (see Cooper et al, column 10, lines 35-37). Hence the existence of an index table is inherent due to this mapping.

6. With respect to Claims 16-19, the attorney argues that there is no need to check two locations. With the BIOS being shadowed, this gives the operating system two areas to choose

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from to access the BIOS—from the RAM or from the ROM (see Cooper et al, column 10, lines 30-42). The alterable memory space is the RAM and the default memory space is the ROM.

The RAM provides faster access to the BIOS than the ROM.

7. With respect to Claims 20-21, 31-32, the predetermined user command is represented by the user resetting the computer/terminal. If the user does not reset, the ancillary BIOS is executed, else it is not. Figure 2A also discloses this.

8. With respect to Claims 22-25, as per the amended limitation, Noll et al teaches an ancillary BIOS package that includes a BIOS update on column 6, lines 8-12, 53-55.

9. With respect to Claims 26, 28-30, as per the amended limitation, the rejection has been updated and hence the attorney's arguments are moot.

10. With respect to Claim 33-36, as per the amended limitation, the rejection has been updated and hence the attorney's arguments are moot.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 7 rejected under 35 U.S.C. 102(b) as being anticipated by Davis (5844986).

With respect to Claim 7, the limitation of “upon restart of the processor, determining whether system memory contains a BIOS package” is met on column 3, lines 48-54; and “authenticating the BIOS package” is met on column 3, lines 61-61; and “upon successful authentication, storing the BIOS package in a reprogrammable BIOS memory space” is met on column 4, lines 7-10, 4-18 and on column 3, lines 44-46, 57-63.

Claims 9,10,16-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Cooper et al (5805882).

With respect to Claim 9, the limitation “a processor” is met on column 4, lines 57-59; and “firmware electrically connected to the processor” is met on column 2, lines 11-14; and “a first storage space to store a first system BIOS, the first storage space being a read only memory” on column 1, lines 32-39; and “a second storage space to store a second system BIOS and an index table, the index table associating elements of the second system BIOS with elements of the first system BIOS” on column 3, lines 6-10 and column 10, lines 12-42. The index table is represented by the cited address space located in memory. This is because after shadowing is performed by copying the contents of selected portions of the flash ROM memory (i.e. the BIOS contained within the flash ROM) to DRAM, the address of the shadow RAM

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area is then mapped onto the address of the flash ROM address space (column 10, lines 35-37).

Hence the existence of an index table is inherent.

With respect to Claim 10, the limitation “the first storage space is to store a system BIOS and at least one ancillary BIOS and the index table identifying the BIOSs” is met on column 3, lines 6-10 and on column 10, lines 23-25 and 35-37.

With respect to Claim 16, the limitation “executing a system BIOS from a default memory space” is met on column 10, lines 23-25; and “executing an ancillary BIOS according to determining whether an ancillary BIOS exists in an alterable memory space” is met on column 10, lines 12-42; and “if no ancillary BIOS exist in the alterable memory space, executing an ancillary BIOS from the default memory space” on column 10, lines 12-42.

With respect to Claim 17, the limitation “if an ancillary BIOS exists in the alterable section, executing the ancillary BIOS in the alterable memory space” is met on column 9, lines 58-67 and on column 10, lines 1-9.

With respect to Claim 18, the limitation “determining whether a predetermined user command has been entered and, if no predetermined user command has been entered, executing the ancillary BIOS from the alterable memory space” is met on column 9, lines 25-29.

Claims 20-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Noll (6185696 B1).

With respect to Claim 20, the limitation of “determining whether an ancillary BIOS package is present in an enhancement space of firmware” is met inherently on column 6, lines 8-15. Further limitation of “if the ancillary BIOS package is present, determining whether a predetermined user command has been entered if the predetermined user command has not been entered, executing the ancillary BIOS package from the enhancement space, otherwise, executing an ancillary BIOS from a default space of firmware” is inherently met on column 6, lines 16-22. In the cited art, since simultaneous failure is not ruled out, the user is left with no alternative but to restart/reset the computer. Hence this represents the predetermined user command. Fig. 2A also shows that the machine cannot at point 216, the system failure occurs and hence the user is left with no recourse but to reboot the system.

With respect to claim 21, the limitation “decompressing the ancillary BIOS from the alterable section and executing the decompressed ancillary BIOS” is met on column 5, lines 2-5 and the latter on column 5, lines 5-13.

With respect to claim 22, the limitation “determining whether an ancillary BIOS package is present in an enhancement space of firmware, the ancillary BIOS package including a BIOS update, if the ancillary BIOS package is present, determining whether a predetermined flag has been set in the firmware, if the predetermined user flag has been set, executing the ancillary BIOS package from the enhancement space, otherwise, executing an ancillary BIOS from a

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default space of firmware” is met on column 5, lines 5-45 and on column 6, lines 6-15. The ancillary BIOS being included in the BIOS update is inherent on column 6, lines 8-12 and 53-55. The RAM represents the enhancement space and the secondary BIOS represents the ancillary BIOS. The flag that is set is the ROMSEL1. After the secondary BIOS as shown on column 6, lines 6-15 is loaded into the RAM, ROMSEL1 is set and then the CPU executes from the RAM. Otherwise the CPU executes from the default space. (please see column 6, lines 23-40)

With respect to Claim 23, the limitation is similar to Claim 21 and hence its rejection can be found therein.

With respect to Claim 24, the limitation “determining whether an ancillary BIOS package is present in an enhancement space of firmware, the ancillary BIOS package including a BIOS update” is met on column 5, lines 5-7 with respect to column 6, lines 8-15; and “if the ancillary BIOS package is present in the enhancement space decompressing the ancillary BIOS package” is met on column 6, lines 40-44; and “executing the ancillary BIOS package” is inherently met on column 6, lines 40-50.

With respect to Claim 25, the limitation “searching memory for a decompressor associated with the ancillary BIOS package and, if the decompressor is not found, executing a second ancillary BIOS package from a default space of firmware” is inherently met on column 2, lines 18-26 and 36-43.

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 8 rejected under 35 U.S.C. 103(a) as being unpatentable over Davis (5844986) in view of Cooper et al (5805882).

With respect to claim 8, Davis meets all the limitation except the limitation disclosed below.

The limitation of "determining whether the BIOS package is successfully stored in the reprogrammable BIOS memory space," is met by Cooper et al on column 10, lines 61-67; and "if so, report a success flag identifying the BIOS package as successfully stored" is met by Cooper et al on column 11, lines 11-13 and on Fig. 4B, ref. nos. 228.

It would have been obvious to combine the teachings of Cooper within the system Davis because setting a flag to let the system know that the BIOS is successfully stored will enable the system to know whether or not to proceed with loading a backup BIOS.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cooper et al (5805882) in view of Noll (6185696 B1).

With regards to Claim 19, all the limitation is met by Cooper et al except the limitation disclosed below.

The limitation of "decompressing an ancillary BIOS from the alterable memory space and

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executing the decompressed ancillary BIOS” is met by Noll on column 5, lines 2-13.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Noll within the system of Cooper et al because the ancillary BIOS needs to be decompressed in order to be able to download to the system. A compressed BIOS cannot be downloaded to the system and hence decompression is a necessary step.

Claim 26 rejected under 35 U.S.C. 103(a) as being unpatentable over Bodin et al (6091430).

With respect to Claim 26, Bodin et al discloses “during execution of a system BIOS, determining whether a video BIOS exists in an alterable firmware section of a memory system and if no video BIOS exist in the alterable section, executing a video BIOS in a non alterable firmware section in the memory system” on column 4, lines 41-45, column 5, lines 9-22, 31-40. The video BIOS is furthermore disclosed by Bodin et al on column 4, lines 41-45.

Claims 28, 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bodin et al (6091430) in view of Cooper et al (5805882).

With respect to Claim 28, Bodin et al meets all the limitation except the limitation disclosed below.

The limitation of “if a video BIOS exists in the alterable section, executing the video BIOS in the alterable section” is partly met by Cooper et al on column 10, lines 11-42. Cooper however does not disclose the limitation of a video BIOS.

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Cooper et al within the system of Bodin et al because a video BIOS would also benefit from a BIOS update being available since its functions are analogous to a BIOS stored on computer system.

With respect to Claim 29, Bodin et al partly meets all the limitation except the limitation disclosed below.

Cooper et al partly meets the limitation of “determining whether a predetermined user command has been entered and, if no predetermined user command has been entered, executing a video BIOS from the alterable section” on column 9, lines 58-67 and column 10, lines 1-9.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Cooper et al within the system of Bodin et al because a video BIOS would also benefit from a BIOS update being available since its functions are analogous to a BIOS stored on computer system.

Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bodin et al (6091430) in view of Cooper et al (5805882) in further view of Noll (6185696 B1).

With respect to Claim 30, all its limitation is met by the combination of Bodin et al and Cooper et al except the limitation disclosed below.

The limitation of “decompressing a video BIOS from the alterable section and executing the decompressed video BIOS” is met by Noll on column 5, lines 2-13.

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Noll within the combination of Bodin et al and Cooper et al because a video BIOS would also benefit from a BIOS update being available since its functions are analogous to a BIOS stored on computer system.

Claims 31-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noll (6185696 B1) in view of Bodin et al (6091430).

With respect to Claim 31, its limitation is similar to Claim 20 limitation as met by Noll. The difference is that in Claim 31 the limitation of Claim 20 is applied to a video BIOS. The limitation of a video BIOS is met by Bodin et al on column 4, lines 41-45. It would have been obvious to combine the teachings of Bodin et al within the system of Noll because a video BIOS would also benefit from a BIOS update being available since its functions are analogous to a BIOS stored on computer system.

With respect to Claim 32, its limitation is similar to Claim 21 limitation as met by Noll. The difference is that in Claim 32 the limitation of Claim 21 is applied to a video BIOS. The limitation of a video BIOS is met by Bodin et al on column 4, lines 41-45. It would have been obvious to combine the teachings of Bodin et al within the system of Noll because a video BIOS would also benefit from a BIOS update being available since its functions are analogous to a BIOS stored on computer system.

With respect to Claim 33, its limitation is similar to Claim 22 limitation as met by Noll. One of the differences is that in Claim 33 the limitation of Claim 22 is applied to a video BIOS.

The limitation of a video BIOS is met by Bodin et al on column 4, lines 41-45. Furthermore, the limitation of “during execution of a system BIOS, determining whether a video BIOS package is present in an enhancement space of firmware, the video BIOS package in the enhancement space including a BIOS update” is met by Bodin et al on column 5, lines 9-22, 30-40.

It would have been obvious to combine the teachings of Bodin et al within the system of Noll because a video BIOS would also benefit from a BIOS update being available since its functions are analogous to a BIOS stored on computer system.

With respect to Claim 34, all the limitation is met by Noll and Bodin except the limitation disclosed herein. The limitation “decompressing a video BIOS from the alterable section and executing the decompressed video BIOS” is met by Noll on column 5 lines 2-13.

With respect to Claim 35, its limitation is similar to Claim 24 limitation as met by Noll. The difference is that in Claim 35 the limitation of Claim 24 is applied to a video BIOS.

The limitation of a video BIOS is met by Bodin et al on column 4, lines 41-45. Further limitation of “during execution of a system BIOS, determining whether a video BIOS package is present in an enhancement space of firmware, the video BIOS package in the enhancement space including a BIOS update” is met by Bodin et al on column 5, lines 9-22, 30-40.

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It would have been obvious to combine the teachings of Bodin et al within the system of Noll because a video BIOS would also benefit from a BIOS update being available since its functions are analogous to a BIOS stored on computer system.

With respect to Claim 36, its limitation is similar to Claim 25 limitation as met by Noll. The difference is that in Claim 31 the limitation of Claim 20 is applied to a video BIOS. The limitation of a video BIOS is met by Bodin et al on column 4, lines 41-45. It would have been obvious to combine the teachings of Bodin et al within the system of Noll because a video BIOS would also benefit from a BIOS update being available since its functions are analogous to a BIOS stored on computer system.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

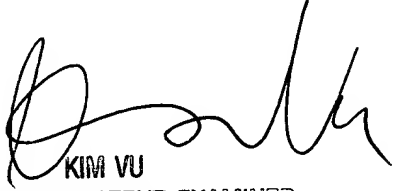
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tracey Akpati whose telephone number is 703-305-7820. The examiner can normally be reached on 8.30am-6.00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on 703-305-4393. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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